CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/BR/W.No.07/CSR.3/798a/CEMENT/2014-15 Date: 27.03.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. B. Ramamohanreddy,** Contractor, Bangalore.
***NAME OF THE WORK**	:	Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	25.03.2015
PERIOD OF TESTING	:	25.03.2015 to 27.03.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	455 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

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Job No.: CTCE/BBMP/BR/W.No.07/CSR.3/798a/SAND-Gradation/2014-15 : 27.03.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B. Ramamohanreddy,** Contractor, Bangalore.

*** Name of Work** : Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 25.03.2015

Date of Testing : 27.03.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.72	90-100	90-100	90-100	95-100
2.36	80.98	60-95	75-100	85-100	95-100
1.18	55.59	30-70	55-90	75-100	90-100
600 Micron	24.35	15-34	35-59	60-79	80-100
300 Micron	11.07	5-20	8-30	12-40	15-50
150 Micron	5.22	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/BR/W.No.07/CSR.3/798a/AGG/GR/2014-15 : 27.03.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B. Ramamohanreddy,** Contractor, Bangalore.

*** Name of Work** : Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 25.03.2015

Date of Testing : 27.03.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.15	95-100	85-100
20	44.55	30-70	0-20
10	21.10	10-35	0-5
4.75	2.90	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

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Job No.: CTCE/BBMP/BR/W.No.07/STEEL/2014-15

27.03.2015

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. B. Ramamohanreddy,** Contractor, Bangalore.
Name of the work	:	Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.
Reference	:	AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015
Date of Test	:	27.03.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	556	13.60	O.K	O.K

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T-2377

Job No.: CTCE/BBMP/BR/W.No.07/CSR.3/798a/CUBE/2014-15 15.04.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Client** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B. Ramamohanreddy,** Contractor, Bangalore.

*** Name of the work** : Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.

*** Reference** : AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015

*** Sample ID** : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as o : 7^{th} day

Sample Received on : 08.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	08.04.2015	15.04.2015	8.364	335.2	14.90
2	08.04.2015	15.04.2015	8.278	324.7	14.43
3	08.04.2015	15.04.2015	8.456	347.5	15.44

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Job No.: CTCE/BBMP/BR/W.No.07/WMM/Gradation/2014-15

07.04.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. B. Ramamohanreddy,** Contractor, Bangalore.

Name of Work : Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015

Date of Testing : 07.04.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25300**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	935	935	3.7	96.3	95-100
22.4	5240	6175	24.4	75.6	60-80
11.2	6585	12760	50.4	49.6	40-60
4.75	4120	16880	66.7	33.3	25-40
2.36	2675	19555	77.3	22.7	15-30
0.600	2230	21785	86.1	13.9	8-22
0.075	2220	24005	94.9	5.1	0-8

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Job No.: CTCE/BBMP/BR/W.No.07/SDBC/Bitumen/2014-15 17.04.2015

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AS PER IS2386 & IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	**Mr. B. Ramamohanreddy,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to Roads and Drains in Amruthanagar 'A' Sector in Ward No.07, Byatarayanapura, Kodigehalli Sub Division, BBMP, Bangalore.
REFERENCE	AEE/(KOD.SUB.DIV)/61/2014-15 Dated: 25.03.2015
SAMPLE I/D	Roads and Drains in Amruthanagar 'A' Sector in Ward No.07
DATE OF TESTING	17.04.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	474
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25.5	26.00
7. Bitumen content in %	5.10	5.20
8. Average	**5.15**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	25.35	5.34	5.34	94.66	90-100
4.75	253.9	53.51	58.85	41.15	35-51
2.36	54.17	11.42	70.27	29.73	24-39
1.18	33.26	7.01	77.28	22.72	15-30
0.3	25.87	5.45	82.73	17.27	9-19
0.075	54.63	11.51	94.24	5.76	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	36.58	7.72	7.72	92.28	90-100
4.75	241.7	50.99	58.71	41.29	35-51
2.36	55.32	11.67	70.38	29.62	24-39
1.18	42.16	8.89	79.27	20.73	15-30
0.3	32.58	6.87	86.15	13.85	9-19
0.075	35.63	7.52	93.66	6.34	3-8

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